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ORIGINAL ARTICLES.

MY CONNECTION WITH THE ALLEGED CASE
OF MIRACULOUS CURE OF SISTER
MARY PHILOMENA.

BY ADOLF ALT, M.D., ST. LOUIS.

For some weeks my attention has been repeatedly drawn to a newspaper item, in which I was at first simply named as a physician who had seen the case before the miracle, whilst now it even claims that I bear witness to the *miraculous* cure of a nun at the Convent of the Visitation in the City of St. Louis. Being absolutely innocent in the matter in every direction, and feeling sure that my record would not allow the affair to be credited as coming from me, I remained silent. I hoped, in this manner, the thing would die a natural death. However, while looking through my exchanges, I just now stumbled over the sweet expressions of Chicago professional courtesy with which the Editors of the *North American Practitioner*, the Journal of the Post-Graduate School of Chicago, take a hold of a newspaper item without ever troubling themselves with regard to its truth, in the following manner:

"The low status of the science of medicine in St. Louis is evidenced by the following clipping from a daily paper of this city:

"**ST. LOUIS, Mo., April 12.**—The Sisters of the Visitation report a miracle which was performed in their midst last Thursday morning. For the last five years Sister Mary Philomena has suffered from what was believed to be an abscess that threatened final injury to the brain. She bled from the nostrils, eyes and ears for hours. Partial blindness resulted from these attacks. Recently Dr. Adolf Alt gave up all hope of recovery unless an operation was performed. The sister was given the right to choose for herself. Her decision was that before she would submit to an operation she would ask that "novenas" be said to the blessed Sister Mary Margaret in her behalf. She did not ask for prayers for her recovery, but simply that 'God's will be made plain to her.'

Tuesday morning Sister Baptista visited the sick nun in her cell and offered up a "novena" in private prayer. She also gave her a relic, a piece of linen worn by Sister Mary Margaret hundreds of years ago, and a phial of holy water with which to bathe her bleeding eyes. In a paroxysm of pain Wednesday night Sister Philomena swallowed the blessed relic. When she awoke Thursday she felt a strange pricking just above her left eye. Lifting her hand to the spot she felt a metallic substance, which she grasped and pulled out. It was a needle, and transfixed on its point was the linen relic that the sister had swallowed the night before. The truth of this marvelous miracle is vouched for by Dr. Alt and the Mother Superior. How the needle ever entered or reached the place where it was found is unknown."

"When the St. Louis doctors have to call in the saints to their aid things must be in a truly desperate condition.

The whole affair reminds us of the miraculous thoracocentesis performed on the prophet Mohamed at a tender age. The Arab historians state that while he and his foster brother, Masroud, were playing together they were disconcerted and startled by the appearance of two angels who laid Mohamed

on the ground and one of them, the Archangel Gabriel, opened his thorax and, taking out his heart, squeezed therefrom the remnants of original sin inherited from our forefather, Adam, in the shape of sundry black drops, after which, replacing the organ in this aseptic condition, they winged their way aloft."

My answer to this—and I hope the gentlemen who so kindly spread the newspaper article will also spread my answer in the same manner—is, that it is a base fabrication of somebody's brain, who thought he was either doing me a particular good or a particular harm by it. The following are the facts:

On April 4, last, I was called by a letter of the Mother Superior to see a Sister who was said to be suffering greatly. When I saw the patient I was told that she had on that day bled profusely from the left eye without provocation.

I found a red upper eyelid, as if it had been rubbed, and a slight photophobia, but nothing else. I told the mother that I could not find anything for which my services might be of any use. According to the Sister's story, I presumed that she was afflicted with haemophilia, as she was stated to have bled from different parts at slight provocation or without it.

This is all I know of the miracle case. I saw the Sister only that once. I did not do anything for her. I had nothing to do with the subsequent alleged miracle and could, therefore, not vouch for it, even if I believed it.

I hope this statement will help to put the weary brains to rest, as far as I am concerned, in a matter as foreign to me as the man in the moon.

A CASE OF ROUND CELL SARCOMA OF THE ORBIT RESULTING IN DEATH.

BY DAVID WEBSTER, M. D., NEW YORK,

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Mr. Albert B., aet. 21, a native and resident of Canada, and by occupation a school-teacher, came to Dr. C. R. Agnew on April 6, 1874, with a letter from Dr. Howard, of Montreal, a part of which I quote *verbatim*. "March 31, 1874. Mr. B. presented himself to me in the beginning of January last with a tumor of the lachrymal gland which had displaced the eyeball downward and very much forward. There was very great congestion of the minute blood-vessels of the retina, enlarged and dilated retinal veins, with marked congestion of the optic disk and impairment of vision. I removed the growth on January 10 last. It was the size of a medium-sized horse chestnut, and encroached a good deal upon the eyeball from which, however, and from its deeper relations, it was easily removed by careful dissection and enucleation. It proved to be a hypertrophied lachrymal gland. Suppuration of the cavity left by its removal followed, with a great deal of infiltration of the upper eyelid, with inflammatory products, and ptosis. As I could not satisfy myself as to how much of the latter was due to inflammatory thickening and how much actual division of the levator muscle, I advised him to return in two months for the purpose of examination as to the need of interfering surgically for the removal of the ptosis. He presented himself to-day in the condition in which you find him, and as I think there was a reproduction of the growth, I have advised him to get the benefit of your large experience."

The patient states that he first noticed protrusion of the right eye on November 20, 1873. There has never been any pain in or about the eye. The patient solemnly affirms that he was unable to distinguish light from dark with either eye

for three days after Dr. Howard removed the growth. There is now complete ptosis. The patient can turn the eye slightly inward and outward, but not at all up or down. The eyeball is pressed forward about half an inch by a growth posterior to it. (L.V.=²⁰/xx, and normal). R.V.=²⁰/cc, and vision not improved by glasses. The ciliary region is injected. The ophthalmoscope shows choked disk. The disk is hypermetropic about $\frac{1}{12}$ while toward the periphery of the retina the eye is emmetropic. The retinal veins in the neighborhood of the disk are enlarged and exceedingly tortuous. There are some small retinal exudations of lymph, but no haemorrhage. The patient says that the vision has been steadily failing for the last two weeks.

On April 9, I gave the patient ether and Dr. Agnew operated. The eyeball was first enucleated after the usual manner. Then, a tumor could be felt, by the finger, filling up the orbit. This was dissected out with scissors far back into the orbit, and still the remaining substance, filling up the very apex of the orbit, felt like neoplastic growth to the touch. The bleeding was considerable, and was controlled by the powdered, dry persulphate of iron. The orbit was stuffed with a sponge covered with the powdered persulphate, lint was packed over this, and a bandage applied over all. The patient took six ounces of ether, and began to vomit soon after the operation was finished.

April 14.—The patient has had no pain and taken no anodyne, and for the first time this morning the upper lid is considerably swollen.

8 P.M.—Both eyelids are a good deal swollen, red, and somewhat tense. There is very little discharge from the orbit. The patient seems weak, and breathes with his mouth open, and with a kind of panting respiration. Pulse 120; temperature 103° . R. Liq. ammon. acetat, 3ss every three hours. 11 P.M., pulse 110; temperature $102\frac{1}{2}^{\circ}$.

April 15, 9 A.M.—Pulse 115; temperature $102\frac{1}{2}^{\circ}$. Continued the same treatment.

April 16, 9 A.M.—Pulse 110; temperature 105° . The case is

now evidently one of erysipelas and the swelling has extended to the cheek and brow, across the nose, and has involved the lids of the left eye, and also the left ear. The patient was put upon whisky and liq. ammon. acetat., aa 3ss, every three hours, and tincture of chloride of iron fifteen minimis every three hours. Also, the swollen parts were kept wet with acetate of lead and opium wash.

April 17.—The patient seems better generally, but complains that the "cords of his neck" are sore. Pulse 95; temperature 103°. Took half an ounce of Rochelle salts last night and had six liquid stools.

April 18, 9 A.M.—Pulse 90; temperature 104°. The patient is to leave off the liq. ammon. acetat., and continue the other treatment.

April 21, 9 A.M.—Pulse 80; temperature 100°. Patient feeling much better. Left ear still slightly red and swollen.

April 24.—The swelling has all disappeared and the pulse about normal. The patient was allowed to return to his home. The orbital growth recurred within six weeks. We heard from him frequently, by letter, detailing the progress of the growth, until he died, apparently from exhaustion, on January 22, 1875. At the time of his death, the tumor, protruding from the orbit, measured twenty-two inches in circumference. There was no autopsy.

The tumor, removed from his orbit by Dr. C. R. Agnew, was given to the late Dr. William E. Hall for examination. He reported as follows: "April 14, 1874. The tumor presented for examination was soft, pale red, and by expression yielded a whitish juice, composed of medium-sized, round, granular cells and free fat globules.

Upon section, round, granular, fatty cells with scanty, granular "intercellular" matter, and free fat globules in great abundance. No fusiform cells, nor any evidence of fibrillation presented. The cells present a uniformly elementary character, much resembling granulation tissue cells. In my opinion the tumor is a round cell sarcoma, undergoing fatty degeneration."

DISLOCATION OF THE LENS INTO THE ANTERIOR CHAMBER.¹

BY BOERNER BETTMAN, M.D.,

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Becker² found, in collecting the statistics of eye diseases, treated for a series of years in some of the principal clinics in Europe and this country, in all about 65,000 patients, that diseases of the lens contribute from 5 to 6% of the total number of cases. Furthermore, the various forms of cataract constitute more than 90% of these different diseases of the lens, so we can readily see that dislocations of the lens into the anterior chamber is an extremely rare occurrence.

In the interesting statistics referred to above, I find that in 21,586 cases dislocatio lenti occurs but 37 times. In the second table amongst 129,414 cases of eye disease observed in European and American clinics during a period of from 2 to 10 years, dislocatio lenti was noticed but 103 times. The percentage of dislocatio lenti is consequently less than $\frac{1}{8}$ of 1%. These tables also refer to 47 cases included in the category of ectopia lenti and luxatio lenti and even if these are added to the heading of dislocated lenses, our percentage would not be materially increased.

We must also remember that the terms dislocatio and luxatio lenti include all the various malpositions of the lens, from a slight tilting beyond the equatorial plane to a complete re-

¹Read before the Chicago Medical Society, April 20, 1891.

²Graefe u. Sämisch Handb. d. Gesammten Augenheilkunde, V, Band I.

moval from the fossa patellaris either into the vitreous, anterior chamber, or through a rent in the sclera under the conjunctiva.

During a hospital and private experience of 13 years in this city, and in the celebrated clinics of Europe, I have met with but two cases of luxatio lentis into the anterior chamber. The first case, to which I will refer later on, I observed while serving as first assistant to Prof. Becker, in the eye clinic of Heidelberg. It may be classified under the head of spontaneous dislocation, the lens having been opaque and shrunken for a period of years. The second case I saw during my service at the Cook County Hospital and is practically the only pronounced case of traumatic dislocated lens into the anterior chamber which has come under my observation. The lens enclosed in its capsule is suspended between the aqueous and vitreous humors by the suspensory ligament, or zonula Zinnii, as it is also termed. This transparent thin membrane is again attached to the ciliary body and is made tense or slack, according to the relaxation and contraction of the ciliary muscle, constituting what is known as the act of accommodation. If perchance the zonula Zinnii is partially torn or entirely severed from its attachment, the lens is thrown out of its normal position and is then sub-luxated or entirely dislocated.

This partial or complete removal of the lens from its position can be either spontaneous or traumatic.

Traumatic luxation is due either to the concussion of the eye, where the outer coverings remain intact, or it can result from the penetration of a foreign body into the eye; again it can be secondary, resulting from an ulceration and perforation of the cornea. Consequently Becker distinguishes three forms of this anomaly:

Spontaneous luxation.

Traumatic luxation.

Secondary luxation.

Spontaneous luxations occur in the great majority of cases as the result of over-ripe senile cataracts.

It must be assumed that the zonula Zinnii is either dissolved

or becomes detached from the lens, owing to the contractile changes instituted by capsular cataract. The modus operandi is explained in the following manner: After a lens has matured, its aqueous portion is absorbed and the lenticular body decreases in volume. Its fibres are torn loose from the posterior surface of the anterior capsule, to be followed by proliferation of its epithelia and the formation of capsular cataract. The subsequent changes are contraction of the anterior capsule, tension on the zonula and partial or complete tearing of the latter. Any slight shock or jarring of the body, violent exertion, a blow on the head or eye, vomiting or any other strain is now sufficient to displace the lens partially or entirely into the chambers of the eye.

Prof. Becker¹ bases this theory on the fact that "spontaneously luxated cataractous lenses always exhibit extensive capsular cataract; and furthermore, that all lenses extracted in their capsules during a cataract operation, never show any trace of the zonula on their anterior capsule. This indicates that the connection is severed directly at the capsule, and not in the continuity of the zonula."

During the summer of 1880 a shoemaker from the Palatinate was admitted into the eye clinic of the University of Heidelberg. He was perhaps 35 years old, and stated that his right eye had been injured during childhood. Soon after the injury his parents noticed the formation of a white object in the pupil. He observed it himself later on in life, and also noticed that its appearance gradually changed. As the years went by the change in color from white to yellow especially impressed him. A week before his admission into the clinic he was disturbed by a feeling of uneasiness and irritability of the right eye. On looking into a mirror he discovered that the yellow body had changed its position from behind the colored part of the eye to a place in front of it.

On examination I found corneal injection, the anterior chamber contained a round, shrunken, yellow capsular cataract,

¹Loc. Cit., p. 291.

its lower part concealed the iris from view, above its upper edge a slit of the pupil was visible. On inquiry I elicited the statement that the patient had not received a direct blow on the eye, neither had he fallen nor sustained a shock in any other way. He remembered, however, on further questioning, having struck his right eye a slight blow with his awl a few days prior to the irritable condition.

After the instillation of eserine, which induced contraction of the pupil and prevented the lens from escaping into the vitreous chamber, I removed the foreign body through a lower corneal incision.

The operation was not accompanied by any unusual occurrence, neither was there a prolapsus of the iris or vitreous. Recovery was rapid, the patient being soon discharged with a round black pupil.

The extracted lens was flattened and quite consistent, it presented a homogenous yellowish white color. It was placed in Mueller's fluid and became a part of the valuable collection gathered by my friend and teacher Prof. Otto Becker.

The concussion of the eye produced by the awl was so slight that it had almost escaped the patient's memory it served doubtless to complete the detachment of the lens from the suspensory ligament which had already existed in part. The position of the shoemaker bending over his work facilitated the dislodgment of the freed lens into the anterior chamber.

Traumatic dislocation of the lens is due, as I have already indicated, to a concussion of the globe. Offending bodies capable of producing such effects usually impinge upon the lower outer quadrant of the eye or bony orbit, since the organ of sight is partially protected on its inner and upper sides by the nose and overhanging orbital plate of the frontal bone.

The force of the injury flattens the anterior portion of the eyeball, diminishes its antero-posterior diameter and increases the equatorial one. The lens, owing to its suspended condition and greater weight, oscillates backward and forward, pulls and tears the zonula Zinnii and thus leaves its normal position.

The connection between the lens capsule and vitreous is so firm that in a fresh specimen one cannot be removed from the other.¹

In the senile state changes ensue affecting the elasticity, not only of the zonula Zinnii, but of the lens capsule also. Overripe cataracts are frequently removed encapsulated, and are not accompanied by an escape or protrusion of vitreous, showing conclusively that the connection between the lens and vitreous can be separated without a break in continuity of the enveloping structure of the vitreous. Not only opaque lenses, but perfectly transparent ones, are liable to be dislodged.

Frank C., æt. 60, upon admission into the Cook County Hospital late in October, 1890, stated that he had been struck in the left eye, about four weeks previously, by a stiff, hard boxing glove. The pain was quite severe; the injury was immediately followed by dimness of vision.

Severe circum-orbital pain ensued, vision gradually failed until, ten days prior to his admission, he could no longer distinguish objects, status præsens, left eye, intense ciliary injection. The cornea smooth and clear throughout. The anterior chamber almost completely filled with an opaque grayish body, circular in outline. Its inner border hidden behind the sclero-corneal margin, but its outer edge free, beyond which the iris is dimly seen. Tension increased. +T. 2. The right eye normal. Patient complains of ocular and radiating pains. October 24, 1890, I placed the patient under the influence of chloroform, the corneal incision was made upward, no iridectomy was done. I made the peripheric capsulotomy and evacuated the soft swollen lens mass with greatest ease. Some transparent cortical substance remained behind. I made no further attempt to remove it, owing to the protrusion of a small bead of vitreous. This I snipped off and reduced the prolapsed iris with a spatula. Eserine having been instilled, a pressure bandage was applied and the patient put to bed.

October 26 a small prolapsus of the iris was visible in the

¹Merkel, L. C., vol. i, Band 1.

inner border of the wound. The wound had not closed, the eye otherwise looked well, patient was able to count my fingers.

November 4 the supply of eserine in the hospital had run out; no more being procurable pilocarpine was substituted. The wound gradually healed with a very small prolapsus of the iris incarcerated in the cicatrix, the pupil was drawn upward, but free and black, ciliary injection was limited to the uppermost quadrant of the eye. Vision good. Patient was very weak and complained of pain in the epigastrium, accompanied by vomiting; bowels constipated.

November 10, 7 P.M., the house surgeon was suddenly called to the patient, and found him in a state of collapse with no pulse at the wrist; his condition could not be attributed to any cause. Death ensued at 8:45 P.M. Post-mortem: Stomach was much thickened; weight, 19 ounces. Peritoneal cavity contained about $\frac{1}{2}$ pint of a bloody fluid.

Intestines showed minute haemorrhage in their walls. Kidneys were contracted. I learned later on from the nurse that she suspected the patient had poisoned himself.

TREATMENT OF IMMATURE CATARACT.

INCLUDING (a) THE REPORT OF TWENTY-FIVE EXTRACTIONS OF
IMMATURE CATARACT, AND (b) A REVIEW OF VARIOUS
MODES OF ARTIFICIALLY MATURING THE
SLOWLY-FORMING CATARACT.

BY JOHN F. FULTON, M.D., PH. D.,

Professor of Ophthalmology and Otology in the University of Minnesota.

With our present mode of removing mature senile cataracts every ophthalmic surgeon may be well satisfied. The success in recent times which our profession has achieved in this direction is probably one of the most brilliant triumphs of modern science, and will be so recorded in the pages of the scientific history of the last few decades. In fact, to lose a case of uncomplicated mature senile cataract is now looked upon with suspicion, indicating that proper care has not been exercised either in the operation or the after-treatment by the surgeon or some of his attendants. This is truly marvelous when we consider that it is but a few years since every surgeon would lose at least 15% of his cases from suppuration of the cornea. But the progress of modern science knows no limit, but, with feverish avidity, strives after more refined diagnosis, more accurate remedies, and more satisfactory methods in surgery. For many years one of the most unsatisfactory classes of cases that came under the care of the ophthalmic surgeon was that class of cataracts known as immature, which required not only many months, but frequently many years, to mature after the patients' sight became so blurred that they were no longer able to read or perform the ordinary vocations

of life. It is to this class of cases that I wish to invite your attention in this paper. Every one present can recall many cases which endured prolonged hardships by having this form of cataract, which for years we did not feel justified in interfering with, as the most conservative of our profession in former years, and even many at the present time, could only advise such patients to wait until they became quite blind before any thing could be done. Such patients often became weary of the prolonged and tedious wait, and naturally would drift into the hands of unscrupulous pretenders, who would rob them of their already limited financial resources.

Antiseptic surgery gave to our profession greater confidence in the resources of our art, so that which was looked upon for many years as hazardous or unjustifiable, has been attempted and found to be practicable and successful, namely: The removal of partially opaque cataract by means of simple extraction. It can be no longer looked upon as inexpedient to attempt to extract a lens, although there may be extensive layers of transparent tissue intervening between the opaque or partially opaque nucleus and the capsule of the lens. It is interesting to us to remember that it was Von Graefe himself who took the first step in this direction, when he advises that in cases where one lens was successfully removed the surgeon should "proceed boldly with the second."

By immature cataract, of course, we mean that form of cataract where portions of the nucleus of the cortical substance remain transparent, where there is not complete opacification of the whole of the lens structure, a form of trouble which is frequently associated with other diseases of the eye, especially diseases of the background, thus interfering with the percentage of successes or perfect results. Probably the best test in differentiating the maturity of cataract from immaturity is the ophthalmoscope. In the immature we always get more or less of a reddish reflex from the background. Formerly it was taught that in mature cataract the iris would not cast a shadow against the lens, but it was long ago pointed out by Forster that "there are cataracts which have been mature for

years in which the iris, however, still throws a shadow, and the dilated pupil is more or less illuminable by the ophthalmoscope, while, on the contrary, there are cases of immature cataract in which the iris does not throw a shadow on the lens, nor does the dilated pupil give the slightest red reflex from the fundus of the eye when illuminated with the ophthalmoscope."

In a majority of the immature or slowly-forming cataracts the opaque cortical substance is divided off into well-marked sectors, with transparent sectors intervening. This transparent material is usually adherent, and the capsule remains behind after extraction of the lens, unless unusual precautions are taken to remove it; being transparent at the time of the extraction, it cannot be seen, but becomes opaque and blocks up the pupil on the following day. This transparent material may be adherent either to the posterior or anterior capsule, although the posterior cortex is generally much thinner than the anterior.

Various artificial processes have been resorted to in order to bring about ripening of the cataract. Puncturing the anterior capsule by means of needles has been faithfully tried, but was not sufficiently encouraging to be continued. In fact, clinical experience has proven this to be a dangerous procedure. The lens at times will swell very rapidly, bringing on traumatic glaucoma, resulting only too frequently in the destruction of sight; although if a surgeon lives in the same building with the patient this can be accomplished with considerable degree of success. Preliminary iridectomy was for a time recommended, and is still resorted to by some surgeons. It was noticed by Snellen, and also by Forster, that iridectomy occasionally hastened the maturity of cataracts. It occurred to Forster that this was caused by the alteration in the form to which the lens is subjected by being pushed forward after the escape of aqueous humor; the connection between the opaque and transparent fibres of the cataract being loosened and the degeneration of the cordical layer thus hastened; he consequently recommended rubbing the cornea with a strabismus hook or some such instrument after the iridectomy.

was done for the purpose of hastening the maturation. This, however, has proved to be equally unsatisfactory. In my experience it is a very rare exception for the operation to be successful, and is attended with some danger. I have, myself, seen two eyes that were lost in consequence of an irido-cyclitis, which took place in consequence of this insignificant operation; so, encouraged by the successful cases reported by Mr. Tweedy, Dr. McKeown, and others, I commenced extracting immature cataracts just as soon as the patient was no longer able to follow his vocation, in consequence of his defective sight. I have operated upon twenty-five cases, all without iridectomy, in the manner described below:

I make a somewhat larger section of the cornea than I do for senile cataract; also make a large section of the capsule by means of a cystotome, corresponding to the section made in the cornea. The reason of making so large an opening is to facilitate the exit of the swollen lens, together with as much of the cortical substance as possible. In all cases where the iris remained prolapsed after the lens was extracted I washed out the anterior chamber, together with the cavity of the capsule, with a 2% solution of boracic acid, the solution being made in distilled water, and made milk-warm at the time it was used. The syringe which I used was the ordinary lachrymal syringe. I did not use the syringe in those cases where the iris went back into the anterior chamber immediately after extraction, although in the future I shall have no hesitation in pulling the iris out by means of a blunt hook, and thus wash out freely the interior of the capsule, being encouraged to do this by the fact that the cases which I did wash out had less subsequent trouble in the way of iritis and general irritation of the eye than those in which I restrained from so doing; also by the fact that I have twice been compelled to pull the iris outside of the eyeball in order to disentangle a foreign body from its meshes, and place this delicate membrane *in situ* again, without having any subsequent iritis. This, of course, was for the purpose of washing out any cortical substance that may remain in the lens capsule, as well as to give additional anti-

septic precautions, the instruments all being boiled before each operation, placed in a saturated solution of boracic acid immediately afterward, and each instrument passed through an alcohol blaze before it touched the eye. Many of the patients, however, were operated upon in my office, and permitted to drive several miles after the operation; none were kept in bed after the operation, and a bandage never was kept on the eye longer than four days, and most frequently only for twenty-four or forty-eight hours, my rule being to remove the bandage as soon as the edges of the wound become adherent and the anterior chamber fills up. Eserine was always used until the anterior chamber became established, after which I immediately changed from eserine to atropine.

Capsulitis is much more apt to take place after the extraction of mature cataract, consequently it is necessary to do a secondary operation more frequently. I have looked over and carefully estimated the statistics of a great many of the reported cases of senile cataract, and find that it is necessary to do a capsulotomy in about 50% of the cases. Of the 25 cases of immature cataract which I have operated upon, capsulitis, resulting in secondary cataract, formed in 18, rendering it necessary to do a capsulotomy in 18 out of the 25. The visual results obtained were very good, $^{20}/_{XXX}$ being obtained in 6, $^{20}/_{XL}$ in 10, $^{20}/_{LX}$ in 4, $^{20}/_{LXXX}$ in 3, $^{20}/_{CC}$ in 2. In one of the cases in which a vision of $^{20}/_{CC}$ was obtained, the case was complicated by choroiditis, and in the other by a fluid vitreous. Three of the cases operated upon were of advanced age; one, a physician, æt. 89, whose cataract had been forming for seven years upon the eye upon which I operated; he had been unable to read for three years. The ophthalmoscope showed a cataractous lens, with quite a large reflex; the lens was sufficiently cataractous, however, so that no outlines of the background could be made out. The extraction was done without accident, and the healing process was uninterrupted, the bandage being used only for forty-eight hours. It was a gratification to meet this aged gentleman, a few months later, at the State Medical Society of South Dakota, reading a paper upon some

scientific subject. His vision after the extraction being $\frac{20}{xxx}$, and with the proper correcting glass, he was able to read the finest print.

Another case, worthy of note, was a lady, aet. 92, who was blind in one eye, due to disease of the background, and the cataract in the right eye had been forming for ten years. She was referred to me by Dr. Moore, of Spring Valley. In addition to the trouble with her eyes, she was a cripple, with rheumatoid arthritis, in consequence of which it was necessary for her to be carried to the hospital. The result in this case was equally satisfactory with that of the one recorded above.

The youngest person operated upon was 32 years of age, the oldest, 52. All cases were done without iridectomy; all but two got well with central pupils without serious posterior synechiaæ. In two there was secondary prolapse of the iris; in one the iris prolapsed the second day, in the other the third day; both were restless patients, and I think the prolapse was due to traumatism applied by the fingers of the patients. The prolapsed iris was not interfered with in either case, and both made excellent recoveries.

If atropine is used and the pupil kept well dilated as soon as the anterior chamber fills up, in my experience the iritis can be always kept under control. In only two cases of the twenty-five operated upon did the iritis assume a dangerous form, and this was in the persons of nervous patients who could not be controlled at the time of the operation, and in consequence of their nervousness I was not able to get out but very little of the cortical substance. I have repeatedly seen just as bad iritis after a perfectly normal senile extraction. The rule which I wish to emphasize is to commence the use of the atropine, eight grains to the ounce, just as soon as the anterior chamber is filled up.

These cases are reported to show that immature cataract can be successfully extracted without doing an iridectomy, and this class of patients need not be doomed to the prolonged years of waiting and anxiety to which they have been formerly subjected.

METASTATIC ABSCESS AND CELLULITIS OF THE ORBIT, FOLLOWING DOUBLE SUPPURATING CHANCROIDAL BUBOES OF THE IN- GUINAL REGION.¹

BY H. V. WURDEMANN, M.D., OF MILWAUKEE, WISCONSIN.

Affections of the eye occurring during the course of constitutional syphilis are of common observance. All the lesions of lues may appear on or in the eye or its appendages. The soft chancre has been observed upon the conjunctiva by several authors,² but other chancroidal lesions are unknown.

Upon examination of all the data I could procure relating to this subject I am unable to find a similar case to the following reported. The cause of idiopathic cellulitis is usually ascribed to a thrombo-phlebitis of the small orbital veins forming a nidus for extension of the inflammation to the surrounding structures. Other cases are caused by periostitis, erysipelas of head or lachrymal disease, or even by metastasis from disease in other organs. The affection is frequently fatal from propagation of the mycotic process to the meninges.

The patient had several chancroidal ulcers of the penis which had been neglected until the occurrence of double buboes of the groin led him to consult Dr. D. J. Hayes, of this city. To the kindness of the latter I am indebted for the reference of the case and for notes on the previous history. The subject was a young Englishman who had lately come over from the old country and who was possibly over confident in

¹Read before the Northwestern Wisconsin Medical Society at Oshkosh, April 14, 1891.

²Hirscher, Wien. Med. Wochenschrift, Nos. 72, 73, 74, 1866. Galezowski, Journ. d'Ophth., 1872.

the cleanliness of our Milwaukee Cyprians. Dr. Hayes first attended him at his boarding place, the room being on the top floor of a tenement, cold and poorly ventilated. The patient was very weak and emaciated from his illness and surroundings. Suppuration had been established on both sides and he was removed to Trinity Hospital, where the diseased glands were carefully opened and cleaned out. The wounds were antiseptically dressed and the applications renewed when necessary. Pus ceased to form after a couple of dressings.

The patient complained that his right eye was troubling him and a few days later the symptoms were quite severe. Dr. Hayes then asked me to take charge of the case and upon examination I found an irido cyclitis which, from the previous history, I judged to have existed about five or six days. The anterior chamber was swollen, and the pupil irregular from the formation of synechiæ. There was considerable flocculent deposit in the anterior chamber. The vision was reduced to perception of the hand held before the face and the pain and photophobia were intense. These symptoms became worse and the conjunctiva chemosed to such an extent that the lids could not be closed.

The usual remedies, atropine and hot applications, were used without material effect, the pain only yielding to large doses of morphine hypodermically. The temperature ranged from 101° in the morning to 103° at night. Panophthalmitis set in and at this time, one week from the day I first saw the patient, there was a slight protrusion of the eyeball, it being downward, outward and forward. The patient had marked rigors followed by further elevation of temperature to 105° at night. Scarification of the chemosed conjunctiva and canthotomy was resorted to and gave temporary relief. He was also given quinine in large doses and supportive treatment. The vision at this time was nil. Ten days from the first time I saw him the chills and high temperature also returned and the patient was very much enfeebled. Swelling of the axillary glands was noted and these became quite painful, although they did not suppurate. The patient complained of pain under the clavicle

and swelling was seen in that region. Dr. Hayes tapped this with a hypodermic syringe and drew forth a few drops of serum. This disappeared in a few days without any further attention.

Suspecting pus formation in the orbit I made exploratory incisions through the conjunctiva at the external canthus and through the upper lid down to the apex of the orbit, but with negative findings. In a consultation with Drs. Bach and Hayes, it was decided to await further developments as the patient was very low. Two days later pus presented near the insertion of the external rectus and the eyeball was dislocated from the protrusion. I then enucleated the globe and released a large quantity of pus from a retro-bulbar abscess in the capsule of Tenon.

There was a free discharge of pus for several days after the operation. To our satisfaction the symptoms rapidly improved and the patient was enabled to leave the hospital two weeks later. He rapidly gained in weight and health and bore an artificial eye with comfort about a month afterward. One point of interest here was that the orbit remained so shallow that great difficulty was experienced in fitting the shell. One was finally made to order after a fruitless search among several stocks of many thousands. That which was at last obtained was very wide, short from top to bottom and flat.

In this case there is no doubt but that the primary cause was the venereal disease and that this was chancroidal. During my treatment of the case there were no symptoms that could be referred to syphilis and Dr. Hayes says that it may with certainty be excluded. The man has been under observation for six months since the operation and appears perfectly healthy. I do not claim that the orbital affection was of a chancroidal nature, but I think that this complication was due to the deposition of a mycotic thrombus from one of the other structures more directly implicated, in the orbital veins which caused suppuration and extension of the disease to the other parts. This might have been the liver or other internal organ

or the clot may have been directly transmitted through the venous system. I have heard of such an event happening to the eye after parturition in which the system had become infected and septicaemia had resulted. The systemic symptoms were septic in character and the orbit seemed to be the principal focus of infection, for all dangerous symptoms ceased after the operation and the patient made a rapid recovery.

AMAUROSIS PARTIALIS FUGAX.

BY G. STERLING RYERSON, M.D., C.M.,

Professor of Ophthalmology in Trinity Medical College, Toronto.

My attention has frequently been called to cases of sudden partial loss of sight, unattended by headache or migraine, occurring in persons who either suffer from digestive disorders or who are subjected to much mental worry. These attacks cause the patient great alarm but experience teaches that they are comparatively harmless.

A lesser form of ocular disturbance from mental anxiety is illustrated by the case of a bank manager, who consulted me some years ago.

He stated that after a day of especially protracted anxiety, he would see waves of light, like luminous clouds, passing before his eyes when he was in the dark. They always traveled from right to left. He did not lose his sight at any time. He soon afterward retired from business, and has not been troubled in this way since.

One of the most marked cases which has come under my observation is the following:

Mr. A., aet. 30, a student, consulted me on February 7, 1887, complaining of the following symptoms: In October, 1884, his sight suddenly became blurred and dim. He saw a peculiar bright circle or star. He had had somewhat similar attacks for two or three years before that, but after this attack the sight remained dim for some time. The attacks usually lasted from half an hour to an hour. They came on about once a month. He had no headache either during the attack or after it. Sometimes it was attended by a dull or confused feeling in the head. He had sharp supraorbital pain during the

attack; also a feeling of tightness over the eyes. The "star" or scotoma is sometimes colored. He says it is a sort of spectrum, yellow predominating.

This patient is thin, pale, blue-eyed and dark-haired; is very intelligent; his general health is poor. He is dyspeptic, and has been subjected to much worry. He has no sexual disorders. He has never had syphilis. The family history is good, there being no tendency to nervous disease. The vision is $\frac{20}{xx} +$ in both eyes. Ophthalmoscopic examination gives negative results. He was put on bromide of sodium, thirty grain doses taken at bedtime, and advised to keep it up for a year. I saw him at intervals for 18 months, during which time there was a great improvement in the frequency and the severity of the attacks. I have not heard of him since.

Another patient told me that previous to an attack he would see a brilliant spot before the eyes which would begin to take on a serpentine motion, and when it reached a certain point the sight would "snuff out" in the central portion of the field, and would gradually return in about a quarter of an hour. This appears very much like an *aura*.

Others again say they see colors, generally blue, in the day time, and sparks and flashes of light at night. The field of vision was concentrically contracted in one case, a lady, observed in July, 1889, but in other cases there was no alteration.

In 1878 I was, for a short time, traveling physician to a gentleman, a patient of Dr. Hughlings Jackson, suffering from *petit mal*. One day he exclaimed "my sight is gone." I got my ophthalmoscope as quickly as possible, and examined his eyes. The whole fundus was pale, and there was an irregular jerky pulsation of the veins. It passed off in a very few minutes. The majority of cases I have observed have been in educated people, more often men than women. I have not found sexual irregularities play a prominent part in the causation. Anxiety and worry have always been complained of. The vision between the attacks is good. Photophobia and asthenopia are often met with. The defect in vision is in the center

of the field. In two cases only did I observe hemianopsia. In one case there was a sudden dilatation of the right pupil, the accommodation being unaffected, which lasted a few hours and passed off. In no case have I observed serious deterioration of vision, even after the attacks had recurred for several years.

These cases appear to be epileptiform neuroses, with loss of vaso-motor control. They correspond very closely with the description given by Förster¹, of *Amaurosis partialis fugax*, and to the *Flimmerscotton*, of Listing,² and such I take them to be.

The treatment I have found most satisfactory has been bromide of sodium or potassium in thirty grain doses, once or twice a day, or bromidia, a drachm at bed time. I think I have seen benefit from aurii et sodii chlorid. gr. $\frac{1}{10}$; ext. nucis vom., gr. $\frac{1}{4}$; ft. pil. Dose one twice a day.

It is important to attend to the hepatic function by administering euonymin or calomel, as required. I hardly need add that sexual excesses, undue excitement and overwork should be avoided. The asthenopia may require the proper adjustment of glasses, and I have found benefit in prescribing in these, as well as in other asthenopic cases:

B	Eserin. sulph.,	- - - -	gr. $\frac{1}{40}$.
	Acid. boric.,	- - - -	gr. v.
	Aq. distill.,	- - - -	3j.

Two or three drops to be put in each eye twice daily.

¹Zehender's Monatsblätter, vii, s 422.

²Ibid, v. s. 335.

A CASE OF HÆMORRHAGIC GLAUCOMA—ENCLEATION—REPORT OF CONDITION OF BALL.

BY JOHN DUNN, M. D., RICHMOND, VA.

Mrs. P., aet. 68, had suffered for two years with pain in her right eye; this pain would at times be very severe in the ball itself, sometimes exist as a neuralgia affecting the whole right side of the face; at times remit into a dull pain about the orbital region. At some time in these two years, the patient does not know when, the sight of the right eye became lost, so that not the strongest light flashed into the eye could be perceived. Examination of the eye showed the tension of the ball to be +2, but under very firm pressure to be suggestive of fluid vitreous. The patient remarked that the eye did not hurt when pressed upon, a fact to be wondered at when the condition of the ciliary region is considered. The cornea was clear. There was complete obliteration of the anterior chamber, the iris being everywhere forced against the cornea. The pupil was contracted and irregular, as if it were bound to the lens by inflammatory exudation. Between the iris and the cornea was a small hæmorrhage, apparently of recent origin; the blood, owing to the pressure of the iris against the cornea, had not fallen into the bottom of the anterior chamber, but was suspended just below the pupil. The lens was opaque. The subconjunctival vessels were not noticeably dilated, nor did the condition of the peri-corneal zone point to a marked inflammatory condition in the interior of the eye. The patient's general health was good. The heart sounds pointed to cardiac hypertrophy, while the condition of the arteries at the wrist gave evidence of arterial degeneration. By the afternoon of

the day on which the examination was made, the haemorrhage in the anterior chamber had so increased that it concealed from view the pupil and the adjacent, perhaps, one-sixth of the iris. Though a troublesome haemorrhage from the stump was expected, under cocaine and a partial chloroform narcosis the eye was removed the same afternoon. For a few moments after the enucleation there was the usual flow of blood, very red. The outward haemorrhage then ceased, and the cut vessels began to bleed into the tissues of the orbit, and did not cease until the orbital tissues and those of the lids were stretched until they were well nigh as firm under pressure as the enucleated eyeball; the haemorrhage spread further into the tissues of the cheek, some of the blood reaching almost to a level with the opening of the nostrils. Slight haemorrhage from the wound continued for two or three days. The absorption of the blood, however, was rapid, and except that there remained for some week more or less discoloration of the skin about the socket, there is nothing to be mentioned about the healing.

Examination of the eyeball. Vitreous perfectly fluid, thin, and of dirty, reddish brown color, and filled with what appeared to be disorganized blood. Microscopic examination showed it to consist of disorganized blood corpuscles, amorphous phosphates and immense cholesterine plates. The choroid showed marked evidences of degeneration, having a coarse, rough appearance. Between the choroid and the sclera were several small fresh haemorrhages, whose bright red blood contrasted strongly with the brownish-red without. The ciliary body, as well as the posterior capsule of the lens, were covered, about 1 mm. thick, with inflammatory products, giving the appearance almost of a vegetative process. This was not, however, firm, but easily broken down. The lens was cataractous, with a small, translucent, firm nucleus, and much cortical substance. The iris was not attached to anterior capsule of lens, as it had appeared to be.

The haemorrhages from the iris and those between the choroid and sclera point to an arterio-sclerosis of the whole intra-

ocular system of vessels as the cause of glaucomatous condition of the eye. If this be so, then an iridectomy done even during the first glaucomatous attack would have been useless, if not contra-indicated. The absence of pain upon pressure on the ciliary region is to be commented upon in view of the condition the ciliary body presented, and may have to be explained upon the supposition that repeated haemorrhages in this region had destroyed the nervous supply in the ciliary body.

In the left eye I could discover no haemorrhages; and except that the tension, before the removal of the right eye, was high and the anterior chamber somewhat too shallow, I could not make out that this eye was on the road the right had followed. The patient's vision was far from good, but much, if not all, of this could be attributed to the patient's age and hypermetropia. The tension of the left eye fell to normal after the removal of the right. The pupil was small and responded well to light.

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SELECTIONS FROM AMERICAN MEDICAL JOURNALS.

IMPROVEMENT IN THE VISION OF MYOPIA BY TREATMENT WITHOUT GLASSES.

BY W. H. BATES, M.D.

CASE I.—Frank G., æt. 18, began treatment March 1, 1888. He had been using a solution of atropine, two grains to an ounce, in both eyes for a week. Pupils dilated *ad maximum*, throat dry, and cheeks flushed. The best vision obtained with both eyes without glasses was $\frac{1}{25}$ the normal. With — 4 D. S., vision $\frac{2}{5}$ the normal. Cloudy vitreous.

Treatment.—Iron, cod-liver oil, laxatives, counter-irritation over the spine, and the removal of hypertrophies in the nose.

March 30, 1888.—The vision of both eyes without glasses $\frac{1}{3}$ the normal.

CASE II.—Sam. J., æt. 18, began treatment March 5, 1888. Vision with both eyes $\frac{1}{25}$ the normal. With — 6 D. S., vision normal.

Treatment consisted of atropine in the eyes, iron internally, seton in temples, and nasal treatment.

March 24.—Vision had improved to almost normal without glasses $\frac{20}{xx}$ — .

CASE III.—Miss A., æt. 30, began treatment December 31, 1887. Vision with both eyes without glasses $\frac{1}{xx}$. With — 10 D. S., vision $\frac{2}{3}$ the normal.

Treatment which seemed to improve the vision was the removal of hypertrophies in the nose, tonics, and counter-irritation.

April 10.—Vision of both eyes $\frac{1}{2}$ the normal without glasses.

CASE IV.—Mr. M., æt. 20, began treatment July 2, 1888. Vision with both eyes $\frac{1}{25}$ the normal. Extensive choroidal changes, and floating bodies in the vitreous. Ordered atropine and iodide of potassium.

July 7.—Vision without glasses not improved. With — 11 D. S., vision $\frac{1}{2}$.

At different periods the nose was operated upon with only temporary improvement.

Three leeches, applied first to the left temple, and at a later date to the right temple, did not improve the vision.

August 4.—Vision the same as at the commencement of treatment. Atropine is still used.

The iodide of potassium was stopped and the vision improved. Various methods of counter-irritation over the epigastrum were employed with benefit.

January 2, 1889.—Vision without glasses $\frac{1}{3}$ the normal.

CASE V.—Hattie K., æt. 24, began treatment June 21, 1888. Vision with both eyes without glasses $\frac{1}{xx}$ the normal. With — 5 D.S., vision $\frac{3}{5}$, the normal.

Ordered atropine and iodide of potassium.

July 7.—Vision without glasses slightly improved.

Treatment of the naso-pharyngeal catarrh was now begun and continued.

August 25.—Vision of both eyes without glasses $\frac{1}{v}$ the normal.

CASE VI.—Louisa H., æt. 8, began treatment November 1, 1889. Vision without glasses $\frac{1}{xx}$ the normal. Ordered atropine and blue glasses, to stop her studies.

December 7.—With — 4.5 D.S. \bigcirc — 5.5 D.C., vision $\frac{2}{7}$ the normal.

January 17, 1890.—Pupils dilated *ad maximum* by the atropine. Vision of both eyes without glasses $\frac{2}{5}$ the normal.

CASE VII.—Nellie K., æt. 13, began treatment October 31, 1890. Vision of both eyes without glasses $\frac{1}{40}$ the normal. With — 10 D.S. \bigcirc — 5.5 D.C., vision $\frac{2}{7}$, the normal. Patient

was under atropine until November 16, 1890, when the vision was found to be unimproved with and without the above glasses. Atropine stopped.

Vision was improved by using a solution of bichloride of mercury as an eye wash.

Wearing a pressure bandage at night was beneficial for a time.

Treatment of the nose improved the vision.

A tenotomy of the tendon of the external rectus muscle of the left eye also improved the vision.

Eserine, by contracting the pupil, improved the vision early in the treatment, but made the vision worse when tried February 2, 1891, with the vision without glasses improved to $\frac{2}{7}$ the normal.

March 6.—Vision without glasses $\frac{2}{5}$ the normal.

Contracting the palpebral fissure (squinting) makes the vision worse.

CONCLUSIONS.

1. The vision in many cases of myopia can be improved very much by treatment without glasses, and frequently this improvement is so marked as to render glasses unnecessary.
2. An astigmatism of even 5 D. did not interfere with good results.
3. The greater the myopia and the older the patient, the longer is the time necessary to obtain the best results.
4. The use of glasses during the treatment must be prohibited.—*N. Y. Med. Jour.*

REVIEW.

OCULISTS' INDEX RERUM. Arranged and classified for the recording of ocular diseases, errors of refraction and surgical operations. By S. C. Ayres, M.D., Cincinnati. J. H. Chambers & Co., 914 Locust Street, St. Louis, Mo. Price \$3.00.

This extremely valuable addition to an oculist's record books, from the pen of our esteemed collaborator, Dr. S. C. Ayres, the forthcoming of which we announced in our March number, is now before us. Every oculist who keeps a careful record of his cases will at once see the great advantages which will accrue to him in his scientific work from this additional help to memory. We cannot, therefore, too highly recommend it to our confrères. The book is well gotten up in every respect, and does credit to the author and publishers.

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